

The Motor Car Paint Shop Hand Book

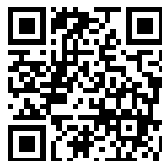
TRADE **VALENTINES** MARK
VARNISHES

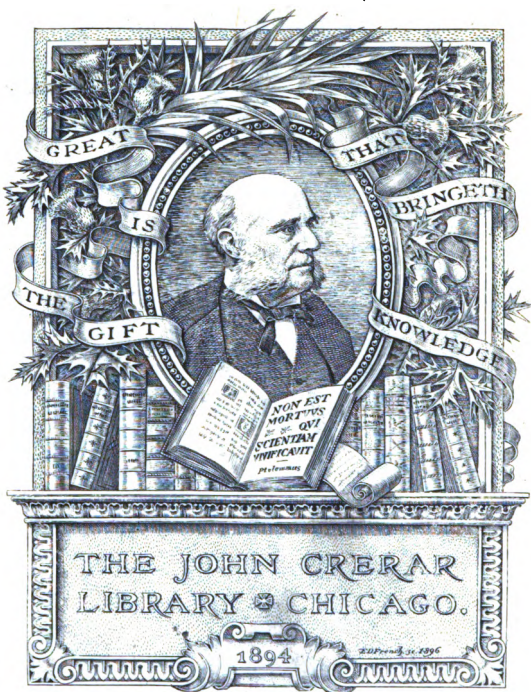
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Valentine & Co., New York.

The Motor-Car Paint-Shop Handbook

*Chapters on: How to Make the Paint-Shop
Pay—Equipment—Painting Methods
and Materials—Colors and Color
Varnishes—Baking Systems—
Bookkeeping and Cost-
keeping—Advertising.*

COMPILED BY
VALENTINE & COMPANY'S
SERVICE DEPARTMENT

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1917



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PREFACE

This book has been badly needed.

The automobile industry, although only a few years old, is already one of the greatest in the country, employing hundreds of thousands of men and hundreds of millions of capital and turning out millions of cars yearly, and up to now no work has been published on automobile painting.

Valentine and Company offer this book to the trade, and especially to the automobile paint-shop which does custom painting work, in the confident hope that it will be of important service.

Especial care has been taken with the chapters on Bookkeeping and Cost-keeping and on Advertising, for it is realized that the automobile painter is often a better painter than he is a business man.

There has been an impression in the trade that the Automobile Paint-Shop is often not a paying proposition. It is believed that a careful study of these chapters and the adoption of the methods therein suggested by any paint-shop which is not profitable, will go far toward putting its business on a paying basis.

The material in three chapters of this book was contributed originally by a member of the Valentine Service Department to the magazine *Horseless Age*, and has appeared in a series of articles on automobile painting in that magazine. Acknowledgement is made to the publishers for permission to reprint them.

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An up-to-date motor-car paint-shop which believes
in advertising

CHAPTER I

TWO MILLION CARS TO PAINT

The automobile paint-shop man has four good reasons for looking forward to days of great prosperity.

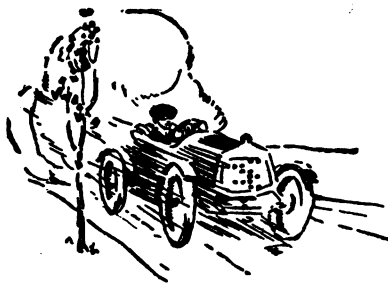
These reasons are:

1—The vast increase in the number of cars. It is estimated that there are now at least 2,000,000 cars in use, with nearly a million to be added this year.

2—The fact that cars are now holding up for several years, mechanically, and are worth re-painting, whereas the early crops of automobiles were ready for the scrap-heap after a year or two of service.

3—Advertising and aggressive salesmanship by the motor-car paint-shop, certain to be a feature soon, are going to increase greatly the percentage of owners who will wish to keep their cars attractive and new in appearance.

4—A good paint-shop, capable of quickly

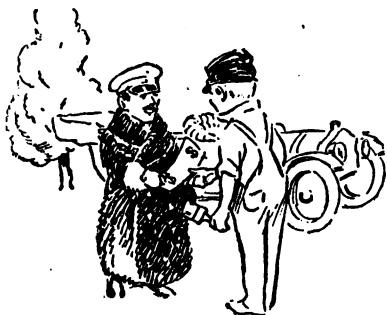


turning out well-refinished cars, is of invaluable assistance in solving the "second-hand car problem" for those concerns forced to take in old cars. No mat-

THE PAINT-SHOP HANDBOOK

ter how good the mechanical condition of a second-hand car may be, a shabby old finish, or a poor job of repainting, will cut many dollars from the legitimate selling-value of the car.

As a maximum possibility the community with one hundred motor-cars should have thirty jobs of repainting from the wood or metal up per year, and one hundred jobs per year of refinishing. The town with a thousand cars to draw on from the town itself, or from the surrounding country, should give three hundred



cars to the car-painters every year for repainting throughout and something like a thousand jobs of refinishing per year.

Nothing like this proportion has held up to now because of the rapid increase in the number of cars, and because up to now the vast proportion of cars have not yet had enough time to grow old.

There has also been the factor in the past that a car went to pieces so rapidly that in a year or two it was not worth repainting. This has all changed, however, and as the manufacturers have learned to make cars that will last, the problem of keeping the automobile in present-

TWO MILLION CARS TO PAINT

able condition has become more and more important to the car-owner.

This book is written to call attention to this certain great growth of the business and to induce the motor-car paint-shop to go out after the new business aggressively and systematically.

It is a handbook not only on paint-shop equipment and painting methods and practise, but on these modern but essential phases of the subject, advertising and cost-keeping. Especial stress is laid on the necessity for charging prices for painting work adequate to insure a legitimate profit, and to this end, for keeping accurate cost records.

Quite as important to the success of the modern paint-shop is the securing of a greater and greater volume of new business, and this can only be done by advertising—publicity—making yourself and your work known to the car-owners of your community.

Another phase of the subject which cannot be neglected is the necessity that expert painters be employed, that the best materials be used, and that prompt service be given the car-owner who is always in a hurry; in other words, that the shop be run efficiently.

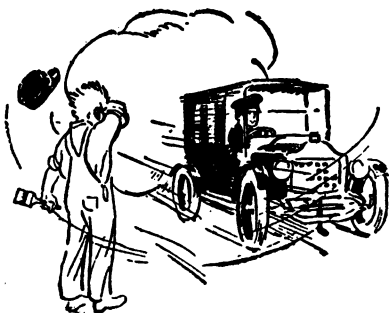
The motor-car paint-shop that will *get* the jobs, do its work properly and promptly, and charge enough to furnish a "living" profit, is going to have a great era of prosperity in the next few years.

CHAPTER II

EQUIPMENT

Now, as to the proper equipment of the paint-shop. An upper floor with an elevator service is best for several reasons, if it is a possibility. For one thing, adequate light is essential to good workmanship. Also there is less dust to sift through from above. Many a good body-finishing job has been ruined just at the critical stage by the thoughtless jarring of the floor above. The painting department should be in quarters as nearly dust-proof as possible. Solid walls and floors and ceiling are necessary for best results. Canvas or tarpaper may take the place of plaster in the ceiling and in the walls if necessary.

Varnish and paint require an abundance of oxygen to dry properly and thoroughly. Plenty of ventilation and fresh air are thus required for good painting work, as the absence of a



sufficient supply of oxygen in the painting-room has ruined thousands of painting jobs. On the other hand, draughts of cold air or even of warm air may ruin the painting job

EQUIPMENT

when the varnish is in its most sensitive condition, soon after being applied. A good ventilating system without draughts is thus required, and its necessity cannot be overestimated or overemphasized.

Varnish, varnish-room and vehicle must all be of uniform temperature: not under 70° and not over 75° Fahrenheit, if it can be avoided.

The painting department must be well heated with a dependable heating system. Stoves may throw off gas at night, and gas is bad for wet varnish—if coal or gas-stove heat is the only kind obtainable. A stove in the finishing-room itself is a mistake. Steam or hot-water heating is the best system for the paint-room. The temperature in the painting-room should never be allowed to drop much below 70° within six or eight hours after a coat of varnish has been applied, and your heating system must be sufficiently good to provide against any such accidents.

Facilities for moving the heavy body of the car conveniently and rapidly are necessary in the motor-car paint-shop. A vacuum-cleaner is an important convenience.

Proper storageroom for all accessories should be provided by the paint-shop. One plan is to have numbered bins or lockers and to give every car a number when it reaches the paint-shop, and put all accessories into the locker of that number. Then by making one man responsible for the storageroom and forbidding

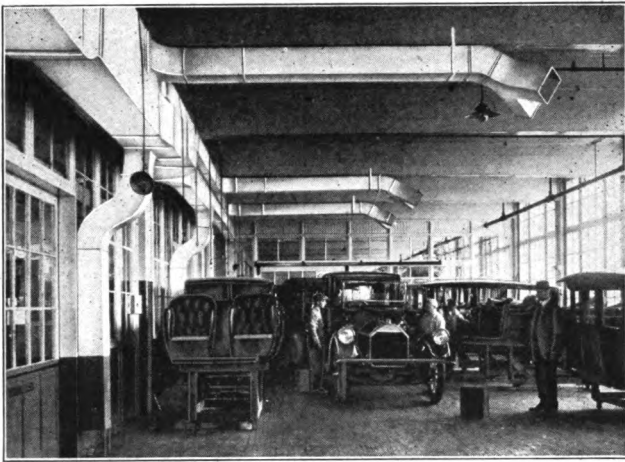
THE PAINT-SHOP HANDBOOK

anyone else interfering with him, the percentage of losses is reduced to a minimum and the paint-shop is fortified against disputes with owners which must sometimes occur.

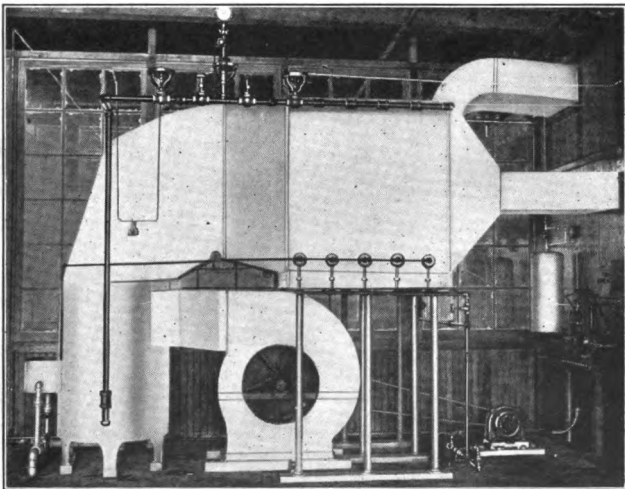
Another item of equipment frequently not found in the motor-car paint-shop is an adequate and systematically arranged stockroom for painting materials. It is not necessary, of course, to have a large room for the purpose. A closet with good shelving is all right and open shelving is very satisfactory, if protected by a screen-door that can be locked. The point is, that the stock should be kept systematically, the cans should be kept clean and free from dust, the different styles of varnish should be in different places, and the different colors, both in japan colors and in color varnishes, should be separated. There should be a record kept of all painting materials purchased and of all materials delivered to the painting-room.

Every paint-shop should always keep on hand a good supply of paint-presses, brushkeepers, brushkeeper varnish, paint- and varnish-strainers and, most important of all, brushes of all kinds in perfect condition.

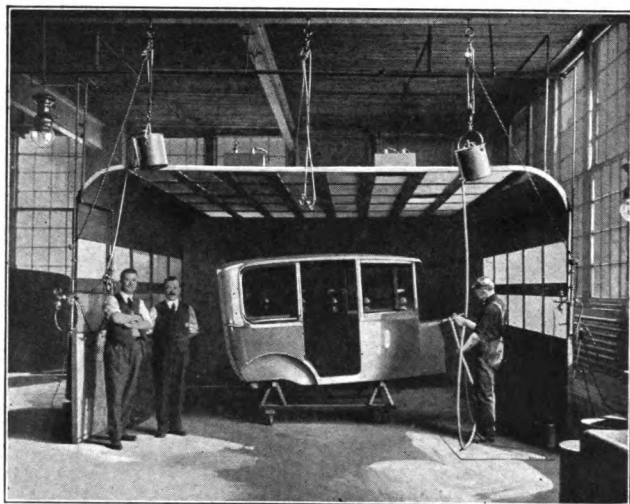
Valentine & Company supply brushkeepers, paint-presses, varnish-strainers, and finishing-room thermometers without charge to all shops using their materials. They manufacture a high-grade brushkeeper varnish which many paint-shops keep always in stock like other varnishes.



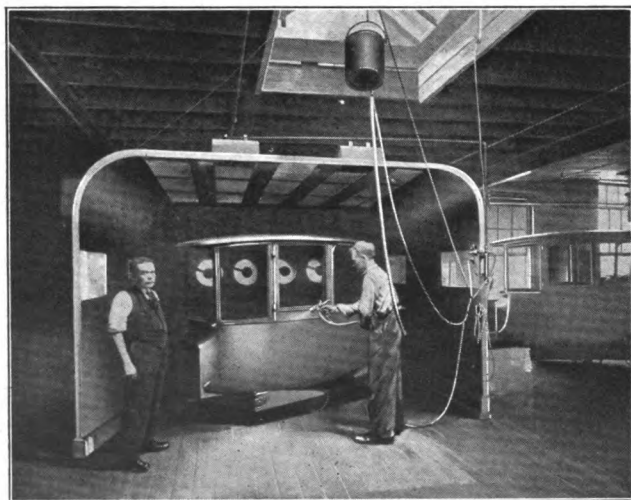
**Finishing-room of the Pierce-Arrow Motor Car Co.
A Greeff apparatus cleans the air, furnishes
humidity and regulates the heat**



**Quick-drying apparatus installed by the
Greeff Engineering and Manufacturing Company**



**Spraying Valentine's materials in the Fisher
Closed Body Shop**



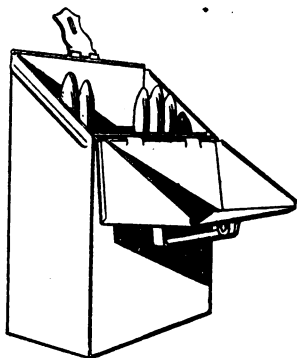
**Spraying Valentine's materials in the shop of
the Anderson Electric**

EQUIPMENT

This is a very sketchy description of the proper equipment of a paint-shop. This end of the business should be left largely or entirely to the practical painter of the establishment.

A vital question to be considered is the character of work to be done in the paint-shop. If a large volume of work is to be expected or to be sought, an artificial drying-apparatus may be desired. Work may be turned out much more rapidly and economically with such an equipment. Reference is not here made to a baking-apparatus such as is used by the manufacturers in enameling hoods and fenders with black enamel. This oven requires several hundred degrees of heat and few paint-shops need it.

Many paint-shops do have a large oven capable of a temperature from 110° to 120° which simply hastens the drying of the ordinary paint coat so that not more than four or five hours is required for varnish which ordinarily would not dry in less than two or three days. Such an oven



Valentine Brushkeeper
(Supplied to every customer)

would not be a wise investment for the average-size paint-shop in the smaller city or town.

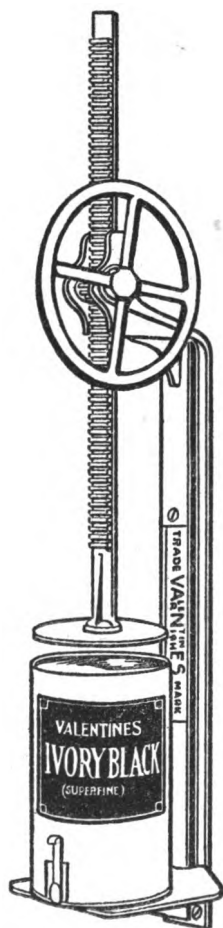
Another question to be considered is that of whether to install an air-brush system or a flow-

THE PAINT-SHOP HANDBOOK

ing-machine system, instead of the old-style hand-painting system. These systems need only be considered by the large city shop where the volume of work may be great.

There is a difference of opinion as to the merit of the work that can be turned out with these systems. Some of the automobile manufacturers, after trying these rapid systems, have given them up and gone back to the old hand-painting methods. Others are strong believers in the machine work, especially the concerns which turn out large numbers of low-priced cars. For the average paint-shops this question is largely academic. The machine systems are beyond their needs and the old-fashioned painting methods will be found best. Fortunately, too, the best chance for the paint-shop to make real money will be in turning out high-grade work and getting a good price for it.

EQUIPMENT



VALENTINE PAINT - PRESS
TO BE FOUND IN NEARLY
EVERY PAINT-SHOP

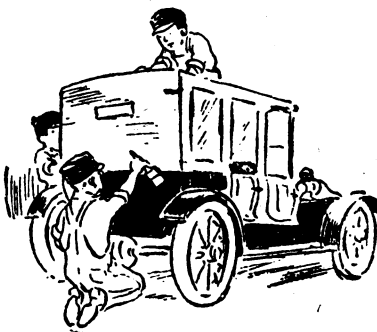
CHAPTER III

SUCCESSFUL MOTOR-CAR PAINTING

This book is not intended to teach motor-car painting. It will not tell a man who knows nothing about painting how to do a fine automobile painting job.

The trained professional painter is the only man who should be allowed to do any vehicle painting. The painting of an automobile is a difficult and tedious job, requiring the skill and experience of the well-trained professional painter for good results, or even passable results.

Valentine & Company naturally receive thousands of requests from motor-car owners for information on how to paint their cars. The advice we always give them is the advice which Mr. Punch gives to those about to be married—"Don't."



There are offered in the following chapters three long-tried and well-proved systems of motor-car painting, designed to meet the requirements of the average motor-car paint-shop

SUCCESSFUL MOTOR-CAR PAINTING

on all different grades of work.

The first system is a quick system for hurried work where speed is considered of more importance than best results. The Celox System may be applied from the wood or metal up in five or six days, if absolutely necessary. It is in use in hundreds of shops and the results obtained are good, if not the best. The cost of painting a car with this system is smaller than with any other. This is true both of material and of labor cost. A big limousine car may be painted with the Celox System with from five to six dollars' worth of painting materials, and in perhaps thirty-two hours of actual labor, as follows:

MATERIALS:

Celox Metal Primer or Wood Primer,	1	Quart
“ Knifing-surfacer—2 coats.....	15	Lbs.
“ Sealer	1	Quart
Color Varnish	2	Quarts
Finishing-varnish	1	Quart

LABOR:

Primer	1½	Hours
Putty-up	5	Hours
Two coats Knifing-surfacer.....	7	Hours
Sand and Celox Sealer	8	Hours
Color Varnish	2½	Hours
Stripe- and Finishing-varnish	8	Hours

The “Three-V” System, the second system described, is for the medium and finer grades of work. Somewhat more material is required, though not much, and the job requires about

THE PAINT-SHOP HANDBOOK

double the amount of time for the minimum of the Celox System. Work done with the "Three-V" System can be charged for at a higher rate and will reflect greater credit on the paint-shops turning it out.

The Ideal System, the third described, is for the highest grade of work and is the system in use in the finest shops in the country. This system should be used in all cases where the car-owner has time and wants the best. The best prices may be charged for this work, for it insures the best results.

Before taking up in detail these different painting systems, a few preliminary remarks regarding the care of painting materials and brushes and the general condition of the paint-shop are advisable.

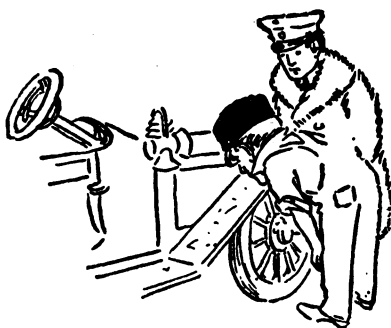
When a can of material is opened it should be immediately closed and tightly corked as soon as any material is removed from the can, as nearly all materials deteriorate when they come in contact with the air.

All materials containing pigment have a tendency to settle in the can. In some grades of paint and color varnishes this tendency is greater than in others, but it is never entirely absent. In good shops it is often the rule to go over the stock of pigment materials every so often and turn the cans upside down or reverse them to their proper position, as the case may be. If this rule is followed, it will almost eliminate trouble from the settlement of pigments.

SUCCESSFUL MOTOR-CAR PAINTING

It is well, however, as a precautionary measure to shake well any material containing pigment before using.

Your old-fashioned painter, brought up perhaps on the apprentice system and thoroughly grounded in the principles of right practise, is as careful of his paint-brushes as he is of his gold watch. He will not allow any other painter to touch his brushes. He keeps them perfectly clean and always places them immediately in the brushkeeper as soon as he is finished with a



job. A first-class brush kept in this way will last for many years—sometimes twenty or more—and be as good at the end of that period as at the beginning. In fact, a good painter prefers an

old brush to a new one.

The importance of thoroughly cleaning every job before applying any paint coat cannot be insisted on too strongly. The mud coat to which the old carriage was subjected is hardly worth mentioning in comparison with the combination of grease, mud and road-oil which accumulates on the motor-car if the owner is not especially careful in looking after his

THE PAINT-SHOP HANDBOOK

machine, and even the neatest of owners allows the chassis to become caked with it.

Another foe to the finish of the car is the recently introduced "polish," under its various disguises. Most polishes injure the old finish itself and should be strictly let alone by the owner, but their effect on the old finish is not their worst evil. Chiefly, the good painter detests them because it is pretty nearly impossible to remove them thoroughly when he gets ready to give the car a new finish. If any slight trace of wax, one of the ingredients of most of these "polishes," remains in the cracks of the old coats, or on the surface, it is certain to be a menace to the new job.

More painting jobs have gone wrong in the past few years because of this evil than from any other cause particularly. Even the best of painters get caught napping occasionally when the washer has not been thorough enough in his work, because on the surface the job seems to be thoroughly clean, while in the deeper cracks there may lurk a little wax that will greatly retard if not prevent the drying of the paint coat or varnish.

Wash the car thoroughly first with gasoline and then with clean water, and be certain that the surfaces to be painted or varnished are thoroughly dry before applying any coat of material.

In conclusion, it is well to refer again in this

SUCCESSFUL MOTOR-CAR PAINTING

place to the other chief foes of good work: dust, draughts, coal-gas, lack of oxygen and insufficient heat.

At the risk of becoming tiresome it must be insisted that success in painting and finishing work depends absolutely on the avoidance of these evils.

When a job goes wrong, nine times out of ten it will be found to be due to one of these causes:

Wax

Dust

Lack of Oxygen

Coal-gas

Insufficient heat

Insufficient drying of surface or of undercoat.

CHAPTER IV

THE CELOX RAPID SYSTEM

Schedule for Painting and Finishing Metal Bodies.

FIRST DAY.

Clean scale, if any, from the surface with a wire brush. Then go over it carefully, rubbing hard and strong, with emery cloth preferably, or scour surface with No. 1½ sandpaper. Dust off and apply with a soft-point brush, round or oval, one coat of Valentine's Celox Metal Primer, a smooth, free-working material specially adapted to metal. Lay on an even coat of this primer, well brushed out, a fundamental virtue of which is that it requires no wiping off, thus reducing the cost of application to the minimum. Celox Metal Primer is additionally valuable from the fact that all its elements of strength, capacity for expansion and contraction, and its elastic properties in general are left undisturbed on the surface and in the minute pores, where they belong. Moreover, Celox Metal Primer has a powerful affinity for succeeding coats, welding them to the surface and impart-



THE CELOX RAPID SYSTEM

ing to them something of its own resisting properties.

Let dry twelve hours.

SECOND DAY, A. M.

With a soft-point brush apply a coat of Valentine's Celox Knifing-surfacer (Sanding-surfacer), first having thinned the surfacer with pure turpentine added gradually and beating to a cream-like paste if desired. Allow this coat to thicken through evaporation (say for ten minutes) to a point where, with a broad-blade scraping-knife it may be knifed down to all coarse patches of surface and level up inequalities, making the surface compact, dense, level and perfectly smooth.

To save time and consequent expense, the knifing may be dispensed with if care has been taken to apply a smooth and even coat.

This surfacer, in case of quick work, is possessed of manifold advantages, among which are its pliability, elasticity, bodying-up property, density, adhesiveness, and easy-working qualities.

These are invaluable virtues in building over a metal base under the restriction of an abbreviated time allowance, and insure a foundation to withstand practically every form of severe service.

Another important advantage of Celox Knifing-surfacer (Sanding-surfacer) is that it is furnished in various shades so that it can be

THE PAINT-SHOP HANDBOOK

successfully used in rapid-method work both as a superb surfacer and as a groundwork for the color coats. In addition it can be baked if desired.

Let dry six hours.

SECOND DAY, P. M.

Using first No. 1 sandpaper, and lastly polishing off with No. 0 sandpaper, surface the Celox Knifing-surfacer (Sanding-surfacer) down to a uniform, smooth condition, like a surface rubbed with water and rubbing-stone; but *do not* scour this material with stone and water.

Dust off.

Apply a light, even coat of Valentine's Celox Sealer well brushed out, using the material just as it comes from the can.

Celox Sealer is an absolutely essential article in any quick system. It permits the use of a quick, hard-drying surfacer which can be sanded with the best results, for it supplies the life and elasticity necessary after the surfacer is sanded. It thoroughly permeates and seals the surface, providing a perfect foundation which prevents the sinking in of the subsequent coats. Furthermore, if the finish becomes scratched or dented in use the Celox Sealer prevents the penetration of water into the undercoats during washing or wet weather and does away absolutely with flaking and peeling.

Let dry twenty-four hours.

THE CELOX RAPID SYSTEM

THIRD DAY, P. M.

Dust off surface and flow on a coat of Vanadium Color Varnish.

Let dry twenty-four hours.

FOURTH DAY, P. M.

With a soft felt pad, water-moistened and dipped in No. 0 pumice-stone flour, go lightly over the surface sufficiently to deaden the gloss and flick off any existing dirt-nibs.

Flow on a second coat of Vanadium Color Varnish. With striping to be applied, rub out as above, stripe and flow on a full, rich coat of Valentine's Vanadium Double-quick Rubbing Varnish.

Allow this coat to dry eighteen hours.

SIXTH DAY, A. M.

In case of either Vanadium Color Varnish or Vanadium Double-quick Rubbing Varnish having been used, proceed first to rub the surface firmly and uniformly, finishing off by omitting the pumice-stone flour and substituting a water-rub to clean up the surface. After this finish with Valentine's Vanadium Body Varnish, a wonderfully free and safe-working varnish, even over the largest panels, yet one which sets promptly out of the way of dust, and excels in depth of body and brilliancy.

Repainting Old Work.

Over an old-paint surface, scraped and washed down to a solid foundation, or burned

THE PAINT-SHOP HANDBOOK

off, use Celox Metal Primer, for both wood and metal work.

On old work where cost or time has not permitted the absolute removal of all cracks in the paint materials, a sufficient number of coats, applied in the manner described above, of Celox Knifing-surfacer (Sanding-surfacer) to "fill up" these cracks, can be used to better advantage than the employment of so-called crack-fillers. The work should be done exactly as detailed above except for the addition of the extra coats of Celox Knifing-surfacer (Sanding-surfacer), only the last coat of surfacer need be sandpapered.

Over old painting always prime with Celox Metal Primer.

Schedule for Painting and Finishing Wooden Bodies

FIRST DAY, A. M.

Upon *new wood*, first cut down all the up-starting grain, if any, and remove the particles of wood fiber with No. 1 sandpaper, finishing off with No. ½ sandpaper to a fine, smooth surface. Dust off, and with a soft brush apply a coat of Valentine's Celox Wood Primer, which, like the Celox Metal Primer, requires no wiping off with cloth or other material.

Celox Wood Primer quickly penetrates the pores of the wood, seals them up, and lays secure hold on the fibers and offers an ideal primary foundation for succeeding coats. Im-

THE CELOX RAPID SYSTEM

portant, too, is the fact that it will dry smooth, making sandpapering unnecessary to prepare the surface for the succeeding coats of filler, paint or varnish.

Let dry twenty-four hours.

When Celox Wood Primer is applied on metal parts always wipe off the excess primer.

Celox Wood Primer offers a superior foundation for and works in perfect harmony with Celox Wood Filler for work to be finished in natural wood.

For an *old-paint* surface, scraped and worked down to a solid foundation or burned off, use Celox Metal Primer instead of Celox Wood Primer.

The Celox Metal Primer is recommended because it has the quality of remaining on the surface, while the Celox Wood Primer is made to penetrate the pores of the wood.

Let dry twelve hours.

SECOND DAY, A. M.

With a soft-point brush, after adding turpentine and beating to a cream-like paste, apply a coat of Valentine's Celox Knifing-surfacer (Sanding-surfacer).

If desired to knife, allow this coat to thicken through evaporation to a point where, with the broad blade, half elastic scraping-knife it may be knifed down to fill all coarse patches of surface and level up existing inequalities, making

THE PAINT-SHOP HANDBOOK

the surface compact, dense, level and perfectly smooth. Give six hours to dry.

SECOND DAY, P. M.

Using first No. 1 sandpaper, and lastly polishing off with No. 0 sandpaper, surface the Celox Knifing-surfacer (Sanding-surfacer) down to a uniform, smooth condition, like a surface rubbed with water and rubbing-stone; but *do not* scour this material with stone and water.

Dust off.

Apply a light, even coat of Valentine's Celox Sealer well brushed out, using the material just as it comes from the can. (For description see page 24.)

Let dry twenty-four hours.

THIRD DAY, P. M.

Dust off and flow on a rich, strong coat of Vanadium Color Varnish, permitting the coat to dry twenty-four hours.

FOURTH DAY, P. M.

Rub the surface out and carry through the same processes advised with respect to rubbing, striping, and applying second coat of material, either Color Varnish or Clear Varnish, noted in case of metal bodies. (See page 25.)

Allow this coat to dry thirty-six hours.

SIXTH DAY, A. M.

Rub out and finish as in case of metal bodies.

THE CELOX RAPID SYSTEM

A Roughstuff Quick System

In offering our Celox Rapid System and our "VVV" System herewith, it is not the intention to minimize in any way the value of Valentine Roughstuff as a surfacer. Many of our largest customers use Valentine Roughstuff in connection with Celox Metal Primer or Celox Wood Primer as undercoats for our colors, rubbing-varnishes and finishing-varnishes.

A comparatively quick system of this character includes Celox Metal or Wood Primer, Valentine Roughstuff, one coat of flat color, one coat of Vanadium Color Varnish, and one coat of Vanadium Body Varnish or Vanadium Quick Finishing.

CHAPTER V

"THREE-V" SYSTEM FOR MEDIUM-QUICK WORK

Wood and Metal

FIRST DAY, A. M.

If metal, scratch-brush and remove all rust and scale, and roughen the surface somewhat with emery-cloth or -paper. If wood, work the surface down close and fine with No. 1 sand-paper. Dust off and apply a well-brushed-out coat of Valentine's "V" Priming, a material that dries in forty-eight hours, requires no wiping off, lays close and firm to the surface, is elastic enough to respond perfectly to every change in either metal or wood, offers an ideal support for all subsequent coats, and is subject to no change in its physical structure during the process of hardening; this latter being an invaluable point of merit.

Moreover, it possesses a chemical attraction for coats used directly over it, making it a primer of rare worth and usefulness.

Let dry forty-eight hours.

THIRD DAY, A. M.

Prepare Valentine's "VV" Filler, which comes in the form of a heavy paste, by adding gradually, stirring vigorously meanwhile, a quantity of turpentine sufficient to reduce the mass to a consistency slightly heavier than ordinary paint. Apply with a soft, chisel-

“THREE-V” SYSTEM FOR MEDIUM-QUICK WORK

pointed, oval-bristle brush, laying on a full uniform coat.

This “VV” Filler is prepared specially to lay next above “V” Priming, and is of a nature like “VVV” Surfacer except that in point of elasticity it approximates more nearly, as it should, “V” Priming. This is to be preferred on all accounts to the shop-prepared material intended for the same purpose.

Let dry forty-eight hours (except to putty, as follows).

FOURTH DAY, A. M.

To three parts of dry white lead and one part of oil-ground white lead, add equal parts of Valentine’s Crown Coach Japan and Vanadium Rubbing Varnish until a putty of such consistency is obtained that after thorough kneading it can be freely handled without sticking to the hands. Then go over the surface and putty where necessary.

FIRST DAY, A. M.

Take the desired quantity of Valentine’s “VVV” Surfacer and stir into it enough turpentine to reduce the heavy paste to a medium paint consistency, and with a brush precisely like that used for “VV” Filler, apply a nicely flattened outcoat of the surfacer, laying it off lengthwise with the panels.

Let dry twenty-four hours.

This is an excellent, soft, free-working material furnished in various shades to serve, if

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need be, both as a surfacer and as a ground-work for the color coats.

Additionally important to the practical man is the fact that this surfacer when thoroughly dry is an easy, rapid-rubbing pigment, with a finish after rubbing to satisfy the most exacting.

“VVV” Filler and “VVV” Surfacers possess filling and leveling properties to a marked degree. They are manufactured under exact formulas which insure absolute uniformity of composition, working qualities and surfacing-capacity, being to this extent, at least, superior to the shop-compounded pigments.

SIXTH DAY, A. M.

Apply second coat “VVV” Surfacers, laying off at right angles with the first coat.

Let dry twenty-four hours.

SEVENTH DAY, A. M.

Mix yellow ocher to a rather stiff paste in Valentine's Crown Coach Japan, and thin down to a waterlike consistency with turpentine. Apply for guide-coat. Or, if preferred, and following the practise observed in many first-class shops, omit the guide-coat altogether.

SEVENTH DAY, P. M.

Rub the surface with artificial pumice-stone or brick, avoiding surface disfigurements and washing thoroughly after rubbing.

“THREE-V” SYSTEM FOR MEDIUM-QUICK WORK

EIGHTH DAY, A. M.

Lightly pass over the surface with No. 00 sandpaper. Dust off and apply a light, even coat of Valentine's Celox Sealer, well brushed out, using the material just as it comes from the can. Let dry twenty-four hours.

NINTH DAY, A. M.

Apply one coat of Valentine's color ground-work or black.

NINTH DAY, P. M.

Gently, with curled hair, dust off and lay on second coat of flat color or black.

TENTH DAY, A. M.

Apply first coat of Valentine's Vanadium Color Varnish.

Let dry twenty-four to thirty-six hours.

TWELFTH DAY, A. M.

With a piece of thin rubbing-pad moistened, and dipping in pumice-stone flour, work over the surface sufficiently to knock down any dirt “slugs” and dull the luster of the varnish. Wash up carefully, dust off and flow on second coat of Vanadium Color Varnish, or flow on a coat of Valentine's Vanadium Medium Rubbing-varnish.

Allow the color varnish or the medium rubbing thirty-six hours to dry. At the end of this period, rub down firmly and uniformly with pumice-stone flour and water, wash perfectly clean, dust off and apply a coat of Valentine's Vanadium Body-varnish.

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“VVV” SURFACER SPECIAL

In case it is preferred, for reasons of economy or otherwise, to sandpaper the surface instead of rubbing it with rubbing-stone or brick and water, “VVV” Surfacers Special used directly over “VV” Filler is specially adapted. It is furnished in the form of a heavy paste and may be thinned with turpentine sufficiently to be applied to the surface with a double-thick, flat, camel's-hair brush, under which, to furnish the best surfacing results, it should flat-out to a smooth, velvety finish. Allow thirty-six to forty-eight hours to dry, when it will sandpaper freely and to a compact, dense surface. In other words, Valentine's “VVV” Surfacers Special is an ideal sandpapering-material.

CHAPTER VI

PAINTING AND FINISHING THE CHASSIS

Any system of painting and finishing the chassis demands, first of all, a thorough cleaning of the parts, which cleaning may be accomplished, as surface conditions suggest, by first scraping the grease and dirt accumulation, if any, from the surface, following by rubbing with strips of burlap or other coarse fabric soaked in turpentine.

Having the chassis properly cleaned and later dressed over with sandpaper, proceed to bring the surface up by the employment of whatever method or system is used upon the body.

CELOX RAPID SYSTEM

In case of the Valentine's Celox rapid method, use the Celox Metal Primer upon both the metal and wood portions, brushing the primer out thoroughly and uniformly. After twelve hours, brush on a coat of Valentine's Celox Knifing-surfacer (Sanding-surfacer), using it on the exposed parts in a semipaste form which at the right stage of drying may be drawn out under a heavy piece of harness-leather to a glasslike smoothness. The prime requisite in this operation upon either metal or wood, is an application of bodying and filling-up pigment so smooth as to require but very little sandpapering.

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Any necessary puttying should be done upon this coat of surfacer in a fashion to require but little sandpapering, which may be done after twelve hours ready for the following coat of groundwork.

Subsequent process leading up to the finish may approximate in time, method, and material, the process applied to the body of the automobile.

“VVV” SYSTEM FOR MEDIUM-QUICK WORK

With Valentine’s “VVV” System being applied to the body, use “V” Priming upon the chassis, following the thorough cleaning already mentioned, and after forty-eight hours apply with a brush a coat of Valentine’s “VVV” Surfacer Special, using it in the same way advised for the rapid method of chassis painting. For an extra-fine surface, use a second application of the “VVV” Surfacer Special, beating the second coat material rather thin in turpentine and applying with a camel’s-hair brush. Sandpaper this coat gently after thirty-six hours with No. 00 sandpaper and apply coat of color groundwork.

Then observe to the finish the regular practice of the “VVV” System prescribed for the body.

CHAPTER VII

THE P. W. F. SYSTEM

Ideal for high-grade Automobile Painting

*Schedule for bringing up bodies of either wood
or metal*

FIRST DAY

Clean the surface carefully of all dirt or grease. In the case of metal bodies the surface should then be scoured with No. 1 sandpaper.

With a common round bristle brush apply a coat of Valentine's Permanent Wood Filling. The workman then proceeds to wipe off with rags or scrap-burlap every trace of superfluous P. W. F., taking care to wipe out the corners of moldings, etc., until finally the hand may be passed over any portion of the surface without being soiled.

This operation serves at the same time to rub the P. W. F. into the grain or pores of the surface in a most thorough manner.

Allow forty-eight hours for drying.

THIRD DAY, P. M.

Apply a coat of Valentine's Ground Roughstuff, thinned with pure turpentine to a creamy consistency and having about 5 per cent. of raw linseed oil added to the material thus prepared.

Allow forty-eight hours for drying.

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FOURTH DAY

Putty up.

FIFTH DAY

Apply the second coat of Valentine's Ground Roughstuff. This should be thinned with pure turpentine only.

Allow twenty-four hours for drying.

SIXTH DAY

Apply the third coat of Valentine's Ground Roughstuff, thinned with pure turpentine only.

Allow twenty-four hours for drying.

SEVENTH DAY

Applying the fourth coat of Valentine's Ground Roughstuff, thinned with pure turpentine only.

Allow twenty-four hours to dry.

EIGHTH DAY

Apply guide-coat and rub with pumice-stone.

NINTH DAY

With clean cloths rub Valentine's P. W. F. over the roughstuff, being sure to wipe off thoroughly as per instructions for the first day.

Allow forty-eight hours for drying.

ELEVENTH DAY

Apply the groundwork, or a coat of flat color.

Allow twenty-four hours for drying.

TWELFTH DAY

Apply a second coat of flat color.

Allow twenty-four hours for drying.

THE P. W. F. SYSTEM

THIRTEENTH DAY

First coat of Vanadium Color Varnish or Valentine's Black Japan.

Allow forty-eight hours for drying.

FIFTEENTH DAY

Second coat of Vanadium Color Varnish or Valentine's Black Japan.

Allow forty-eight hours for drying.

SEVENTEENTH DAY

Lay on a coat of clear quick leveling or Vanadium Elastic Rubbing Varnish, or a third coat of black japan.

Allow forty-eight hours for the quick leveling or seventy-two hours for the elastic rubbing to dry.

NINETEENTH DAY

Rub the surface carefully with pumice-stone flour, wash well with clear water and wipe dry with a clean chamois skin. Stripe and letter if necessary and let the job stand over night to dry thoroughly.

TWENTIETH DAY

Apply a coat of wearing-body or Vanadium Body Varnish. If an even more durable job is desired give the finishing-varnish one week to "harden," rub lightly, and apply a second coat of the same varnish immediately so that the rubbed surface will have no time to sweat.

CHAPTER VIII

OVEN-DRYING AND -BAKING SYSTEMS

The painter of today is compelled to figure on the time element more than ever before. He is impressed with the fact that every day unnecessarily consumed in the painting of an automobile is a day lost in the delivery of the job and must be figured as a positive loss to the paint-shop.

So it is that, in endeavoring to find some means of hurrying his work along, he naturally turns to the baking-oven. A discussion of the baking-oven proposition will be found in the chapter on Equipment. A few paragraphs here seem necessary on the proper material for use with baking systems.

All of the materials called for in the Valentine Systems explained in the foregoing pages are specially made for work of this sort, and lend themselves in every way to aid the painter in oven-drying or -baking his work.

In general, it is safest to bake all coats at a temperature not exceeding 150° Fahrenheit.

Five to eight hours at this temperature will thoroughly dry and bake any one of the coats in the Valentine Systems, while many of the surfacer, groundwork and priming-coats may be baked in less time—three hours often sufficing.

Higher temperatures than these are not safe in general work, but where more of a bake is

OVEN-DRYING AND -BAKING SYSTEMS

absolutely required Valentine & Company is prepared to furnish materials and directions for their use to suit all conditions.

CHAPTER IX

COLORS: HOW TO MIX THEM

For General Work:

Beat the color thoroughly with a small wooden paddle and add turpentine and pure raw linseed oil as follows: Add the turpentine gradually (stirring continually to avoid lumps), until the mixture is thin enough to be easily laid on, then to a pint of the thinned color add a few drops of oil. Be sure to heat the color adequately, otherwise the turpentine will not properly reduce it and it will be lumpy or grainy.

For Quick Color:

Beat the color thoroughly with a small wooden paddle and dilute with pure turpentine only, adding the turpentine gradually until the color is thin enough to be easily applied with a camel's-hair brush.

Any of the Valentine Colors may be made into varnish-color by first thinning with turpentine and then adding sufficient varnish to produce a *decided* gloss. This gloss should *invariably* be flatted before the job is finished. *Under no circumstances* should both oil and varnish be put into the same cup of color; this precaution being necessary as the most important means of preventing "deviltries" which vex the painter. In all cases let the varnish predominate. In all mixtures of

COLORS: HOW TO MIX THEM

varnish and color add the varnish *freely*, with as little of the color as is actually required for the work to be done.

No trouble need be feared from Valentine's Colors when used with the varnish of any established and responsible manufacturer.

The importance of *not* taking from the open can of paint more material than is just amply sufficient to complete the job in hand cannot be exaggerated.

Varnish should not be added as a binder to a cup of color. When the painter is disposed to add anything but turpentine, let it be a *few drops* of raw oil to the pint-cup of thinned color. This cannot do harm and generally may be said to do good, and the color will present the same dead-flat surface to the coat of rubbing-varnish, thus insuring the adhesion of the latter to the color coat.

On the other hand, a binder of varnish will unite with the japan and form a close surface repellent to the varnish. The one good, safe, conservative rule of first thinning the black or color with turpentine and then adding a few drops of raw oil never was known to make trouble for the painter during the progress of his job, or to chip or scale when the job has been put to the wear of active use.

A job not presenting a dead flat-color surface should be well rubbed over with a soft sponge and cold water and then varnished when thoroughly dry.

CHAPTER X

VANADIUM COLOR-VARNISHES

It is a well-known fact, conceded by all painters of experience and very easily demonstrated, that a coat of color in varnish gives a much more brilliant and richer effect than the same color painted flat under clear-rubbing. This is universally true of most colors and especially so of composites, such as dark greens and the developed lake pigments.

The beauty of undertone that these colors possess cannot be shown to advantage in flat-color under varnish, owing to the fact that japan dries throughout dull and lusterless, whereas all pigments should be suspended in a highly transparent and brilliant vehicle so that the varying lights from undertone and top-color may be reflected clearly upon the eye.

Even whites, light grays and blacks which cannot be said to possess undertones show to much better advantage when brought up in solid covering color-varnish, for the reason that the yellowish cast produced by the application of two or more coats of clear-rubbing over these colors in the flat makes creams of the whites, greens of the blacks, and throws the grays off shade to an alarming degree.

Painters for many years have been using Valentine's Black Japan, Black Color-Varnish and Exterior White Finish for just this reason.

VANADIUM COLOR-VARNISHES

However, the working properties of color varnishes made in other shades were never of the best, and even the long-oil free-flowing color-varnish that was put on the market some years ago fell into disfavor when the careful painter discovered that it could not be rubbed properly owing to its extremely elastic nature.

Valentine & Company have, however, perfected the Vanadium Color-Varnishes, which develop the beauty and richness of any known color to the utmost degree.

The prerequisites of a true color-varnish are three: It must be free-flowing, solid covering, and dry to rub in from twenty-four to thirty-six hours. All of these properties the Valentine Vanadium Color-Varnishes possess to a remarkable degree.

CHAPTER XI

GROUNDWORK FOR TRANSPARENT COLORS

By following a simple principle or rule, good results in the use of transparent colors are generally secured. Upon the groundwork depends, naturally, the tone and beauty of the glaze. But few of the transparent colors will do well over a broadly contrasted, light-toned groundwork.

As a rule, make the groundwork correspond as nearly as possible to the color of the lake. Tuscan red and black are best for many of the lakes. Where a light ground is wanted and it is found desirable to dispense with the black, a rich-toned Tuscan red (such as our "Special Tuscan Red") will suit the purpose well. Especially avoid getting the groundwork too light. Generally speaking, lakes are rich in proportion to their depth—a maroon or a Munich lake is best shown over a deep, warm, red ground; a crimson lake also requires a warm, red ground, but the ground should be brighter; a scarlet lake, glazed over a ground made of Tuscan red and deep orange chrome yellow (enough of the latter to brighten it), will do as well as under any other treatment; but, when a bright *pronounced* scarlet is wanted, use our "Sleigh-makers' Carmine," or "Coach-painters' Carmine." These carmines are described else-

GROUNDWORK FOR TRANSPARENT COLORS

where, and sample-cards shown in the sample pages.

With possibly the single exception of "No. 40 Carmine," all the deep-glazed colors require *depth* to enhance their beauty. A light groundwork will destroy the true deep tone of the glaze, and what we admire so much in the dish will greatly disappoint us after it has dried over contrasted ground-colors.

With Coach-painters' Red—

Use No. 480 groundwork.

With Phenomenal Red—

Use No. 1127 groundwork.

With No. With No. 883 Red—

Use No. 1127 groundwork.

With No. 157 Red—

Use No. 480 groundwork.

With Automobile Red—

Use No. 480 groundwork.

With all Deep Lakes—

Use No. 1096 groundwork.

With Coach-painters' Carmine—

Use No. 320 groundwork.

With Ultramarine Blue—

Use No. 213 groundwork.

After being applied, all colors should be given ample time to dry and harden. If varnished over too quickly, they do not show the same density of color as when allowed proper time

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to harden all the way through. This is particularly the case with blacks.

A very swift-drying color or black painted upon a *soft* lead surface is pretty sure to result in a multitude of fine cracks, and when such a color or black is painted upon a gear leaded in such a manner and immediately followed with a coat of quick-drying rubbing-varnish, there is always a strong possibility that the color or black will unite with the varnish better than it will hold to the elastic lead, with the result that the color or black and the varnish would adhere and dry brittle and then snap off, leaving the bare, smooth surface of the elastic lead intact. This is an experience sometimes met with by the painter and but little understood.

Unless such lead has ample time to thoroughly harden, the above possibility is constantly present.

When the groundwork is properly adapted to the overlying color or glaze, best effects are secured by spreading and glazing over dead-flat surfaces (see remarks on C. P. Blue and ultramarine blue glazing). We would also suggest a very radical contrast in connection with the latter as well as with the pale yellows. Select a smooth spoke and paint it perfectly *flat* with deep orange chrome yellow. When quite dry, flow on a coat of strong ultramarine blue varnish color. No trace of the chrome can be seen, but a very bright, rich blue tone results which cannot be obtained by any other treatment. A

GROUNDWORK FOR TRANSPARENT COLORS

dull salmon color, if painted a dead-flat, will do better as a groundwork for the pale yellows (one coat flat and one coat varnish-color) than any other inexpensive method. This groundwork shuts in once for all the dark lead color of the gear, and possessing a peculiar affinity for the yellow is in turn shut in by the latter. Spread on the yellow or the blue with a free hand—to brush it on would result in streaks, while to flow it on would imply an excess calculated to make trouble after the job goes on.

CHAPTER XII

A FEW PRACTICAL COLOR HINTS

All light chrome pigments appear to better advantage over light-toned groundwork. Most of them are quite opaque, but are more brilliant when applied over fairly light grounds. Vermilions will do better on a *blank* white panel than on any other colors. The Milori Greens should have grounds tinted a trifle lighter than themselves.

Valentine's Superfine Coach-painters'
Blue-Light and Superfine Coach-painters'
Blue-Deep and Groundwork.

These colors will be found more brilliant and satisfactory than any other blues now on the market as they work perfectly free and will not cloud. The following is the one proper method of handling them in order to secure absolutely perfect results, *viz.*: First prepare the surface with one coat of our C. P. Blue Groundwork No. 213. When this is dry take so much of the C. P. Blue as will do over the job in hand, and thin it with turpentine only; make quite thin and apply freely one coat. The color thus mixed will work under the brush with great freedom and dry perfectly dead-flat. It is urged that no binder or varnish, oil, or dryer of any kind be added to these blues; they are designed to be used as above directed and over the special

A FEW PRACTICAL COLOR HINTS

groundwork made for them, which is entirely free from Prussian and Chinese Blues and will not destroy the beautiful tone of the C. P. Blues. When dry apply a coat of varnish-color made of one-quarter pound of C. P. Blue paste and one pound of rubbing-varnish; it is prudent to first thin the color with turpentine when making varnish-color, and then stir it into the rubbing-varnish. By this method of thinning and mixing, as every painter knows, his varnish-color will be perfectly smooth and consistent all the way through. Flow on to the flat surface of C. P. Blue the first coat of varnish-color and note the result of this coat. In a few minutes it will saturate the flat blue and bring out the color to the same richness of tone as it appears in the moist paste in the color-can; also, the groundwork is entirely obscured and there is no appearance of Prussian Blue to mar the beauty of the glaze. When this coat is dry, rub carefully, using water freely and with not too much pumice-stone, then apply a second coat of varnish-color, using no clear varnish until ready for the finishing-coat of wearing-body. There has always been more or less difficulty and uncertainty about blues, particularly the beautiful transparent blues, but these troubles are quite overcome by the above method of painting with our C. P. Blues and groundwork, and we believe they will prove a permanent satisfaction to the painter. While there is no element of blue in this groundwork, it is the one proper color over

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which to paint a deep transparent blue. Valentine's Superfine Ultramarine Blue, handled in the manner above indicated for the C. P. Blues, can be painted over this groundwork most successfully. The two important features of this groundwork are its affinity for the flat coat and its peculiarity of entirely disappearing beneath the glaze.

Don't cover an opened can of blue with water. A spoonful of turpentine will keep it moist a month if covered tightly.

CHAPTER XIII

BOOKKEEPING AND COST-KEEPING

Some vehicle paint-shops are run on the principle of the old apple-woman who bought apples for twenty-five cents a dozen and sold them for two cents apiece and explained that she made money because of the volume of her business.

Some garage paint-shops are run with the idea that they will help the repair business and for this reason may properly be run at a loss.

Some towns have too many paint-shops.

In some towns the paint-shops are so anxious for work that they cut prices against each other, lower and lower each season, while the cost of painting cars is constantly advancing.

Some paint-shops estimate on painting jobs by rule of thumb, taking no account of overhead expenses of any kind.

These are a few of the reasons why some paint-shops do not make money.

This book is not intended for the shop that wants to run its business on any one of these plans.

If you want to make money out of the painting business, it is necessary that you run the shop as a business proposition on a business basis.

The three essential rules are:

1—Satisfy your customers.

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2—Get business in sufficient volume.

3—Charge enough for your work to make the proper percentage of profit on every job.

In order to satisfy your customers you must have first-class painters and use the best materials.

In order to get business you must advertise.

In order to be sure you are making a profit on your work you must have a careful system of estimating, and you must include in your estimates a sufficient charge for overhead expenses.

This chapter takes up the question of how to make a profit on every job.

The elements of cost on every job are (1) labor, (2) materials, (3) overhead, and not the least of these is overhead, though it is often left out of the calculation entirely. After all the elements of cost have been figured in, there should be a set percentage of profit to be added on every job.

The items of labor and material are more or less obvious charges and nothing need be said about them except to ask you to note that it is always wise to use the best materials even though they cost somewhat more, for the reason that they are usually easier to apply and hence tend to cut to the minimum the more expensive item of labor. The cost of material is a relatively small one—not more than 10 per cent. of the whole and usually not more than 5 per cent. It is obvious that, if by adding a dollar to the

BOOKKEEPING AND COST-KEEPING

material cost the labor cost can be cut \$3.00, there is economy in doing so. It is not so obvious, perhaps, but quite as certain that, if poor materials are used, there will be jobs that come out wrong and have to be done over, at perhaps *double* the cost for both materials and labor.

The question of overhead is generally not handled correctly and as a consequence the trouble with the paint-shop that loses money is usually to be found right here.

While the question of the proper overhead charge on a given job is rather complex, if the following suggestions as to method and detail are made use of a correct estimate will be arrived at:

The rent of the paint-shop must be figured; or if the building is owned by the proprietor a proper rental charge must be figured.

Superintendence must be allowed for. If the foreman of the paint-shop also helps in the actual painting work, part of his time (while he is *not* painting) should be charged for as overhead.

All clerical help—stenographers, bookkeepers, office-boys, etc.—and all general office and shop expenses—telephone, light, heat, etc.—must be included in overhead.

A proper charge for bad debts must be included.

The following method of arriving at the proper overhead charge for *all jobs* is a fairly

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good one. It is simple and sufficiently accurate for any except the largest shops:

Add together the average yearly total of the following:

a—Rent.

b—Proprietor's and foreman's time not actually employed in painting—*i. e.*, superintendence.

c—Clerical help and time of workmen not employed in productive work.

d—Heating, lighting, telephone, stationery, postage, advertising, etc.

e—Depreciation and up-keep, including average amount expended for furniture, brushes, machinery, etc.

f—Insurance of all kinds, taxes. (If you own your building do not make a double charge for taxes, interest, etc., and also for rent).

g—Bad debts.

Divide the total amount by 300 to give the average overhead per day.

Divide the overhead per day by the average number of cars in the paint-shop throughout the year to give the average overhead charge per car per day.

Multiply this figure by the number of days a car is in the shop to give the overhead for the job.

Do not include in this overhead charge your storage charge after your painting job is completed.

In estimating a proper price for a job, the

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man who makes the estimate should figure out the number of days it will require and begin with the overhead charge. He should add to this the cost of labor on the job, including a proper charge for any of the foreman's time which may be spent in the actual painting of the job.

To this should be added the cost of painting materials.

The total of all these items will give the approximate cost of the job and to this should be added a proper percentage of profit. It is usually not safe to estimate less than 50 per cent. profit.

As to what should be charged for motor-car painting jobs of different kinds, this will necessarily vary with conditions, such as rent and the labor wage-scale in the different localities. The percentage of profit will have to be governed to a certain extent also by local conditions such as the prevailing price for car-painting, the amount of work to be done, etc. But don't allow yourself to be governed too much by local conditions—make your own conditions. If work is scarce, advertise and get more; if other painters are doing work too cheaply, advertise the quality and durability of your work and make good on your promises, and you will be able to charge a higher price *and get it*.

The great end in view is to charge enough to insure a legitimate profit. At the present time

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the average paint-shop *is not doing this*. There are all kinds of leaks which do not get into its estimates.

The motor-car business in all its angles should be run on a business basis. The painting end, because of poor business methods, is the only end that has not shared properly in the prosperity of the new industry up to now.

It is up to you to change this condition as far as you are concerned.

ADVERTISING

HANG IN YOUR GARAGE

How to Preserve the Finish of Your Car

If your car has been properly finished or refinished, the job has required time, and skilful workmanship, and proper paint-shop facilities, and the best grades of paint and varnish, and such a finish deserves to be treated as considerably and as carefully as any other fine piece of craftsmanship. If it is given proper treatment you will reap a fine dividend of continuing satisfaction.

Don't allow caked mud to remain on the car. It may leave a spot which can't be removed. Wash the car frequently.

No varnish will stand having dust or mud rubbed off, nor will it endure the grits of dust and mud driven into it by the water-blast from a high-pressure hose, to which it is often subjected.

Use cold water and a soft, clean sponge on the body of the car. Use no soap on the body. Mud, wet or dry, should be removed with flowing water squeezed from a clean sponge or flowing from a hose with very little pressure, never with a water-blast.

Don't allow curious persons to rub their hands on the varnish of your car, for dust either on the hand or the varnished surface will cause scratching.

Don't keep your car in a stable or near horses. Ammonia fumes are deadly to any varnish except Chassis Finishing.

It is dangerous to use body-polishes on your car. In applying them the varnish will become scratched and abraded, and those containing wax cause trouble with the drying and durability of the new coats when the car is repainted.

Don't assume that any varnish can last forever. Valentine's varnishes, with which this car is finished, last longer than others, even with careless treatment, but they will last two or three times as long if you treat them well.

When the varnish begins to perish, bring it back to us and we will give it a coat of Valentine's varnish. This will save the under-coats and is a measure of real economy.

<p>YOUR BUSINESS CARD HERE</p>

(Card furnished free, for distribution by Valentine customers.)

CHAPTER XIV

ADVERTISING

The fact has been noted elsewhere that the average old-time carriage-painter is not a good business man measured by modern standards. His business policy and business code are those of the village blacksmith under the spreading chestnut-tree. In fact, he is a lineal descendant of the village blacksmith and very frequently runs his paint-shop as an adjunct to the village smithy.

One thing the old-time carriage-painter does not take to readily is advertising. One thing the modern automobile paint-shop must do is advertise. The motor-car owner expects to be advertised to; he gets into the habit of reading the motor-car advertising and acting on it; he buys his car as the result of advertising and he buys his accessories in the same way, either consciously or unconsciously; he will respond quite as readily, and perhaps more readily, to the automobile paint-shop which advertises because it is unusual for the paint-shop to advertise.

It has been figured out that there are something like two million cars in this country at the present time which should be painted or varnished. At an average price per job of \$50 this means one hundred million dollars' worth of painting work for somebody to do. If, as is

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possible, the average price per job should be reduced on account of the number of small cars, the sum in any event is stupendous.

This work is not being done at the present time. Only a small percentage of the cars which should be painted and varnished are now receiving proper care in this direction. It is distinctly a case of advertising, to create business in the first place, and in the second place to bring it to the man who advertises.

The automobile paint-shop has an important advantage in its publicity work. It has access—or can have—to a list of all the motor-car owners in its vicinity, an advantage possessed by almost no other line of business. This suggests that direct advertising to the motor-car owner is the most feasible and the surest to bring results. Booklets, folders, blotters, postal cards, letters, etc., if properly gotten up are sure to bring business.

Newspaper advertising is in many instances quite as important. Where the local paper is a good one and read by the community, newspaper advertising if properly done cannot fail to bring results.

The automobile paint-shop should, first of all, have a good, big sign informing the world that it paints motor-cars, so that even the man who runs an automobile may read. Next, the letter-head should distinctly state that automobile-painting is one of the features of the business.

THE PAINT-SHOP HANDBOOK

The business-card should contain the same statement always.

Valentine & Company have a logically worked out, successful advertising campaign for the motor-car paint-shop which is free to any user of Valentine's varnishes and other painting materials. Samples of some of this advertising matter are illustrated herewith.

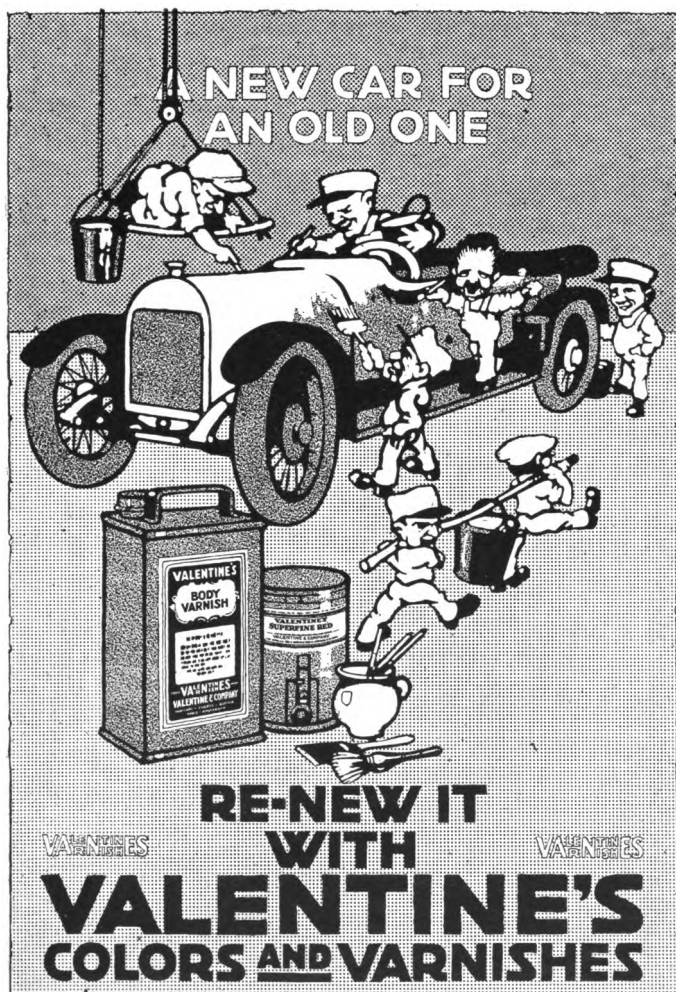
A well-worked-out series of newspaper ads., illustrated and designed to run for three months once a week or for a year once a month, is also furnished. The cuts are ready for use with the paint-shop name to be filled in at the bottom.

More important, a complete mail-campaign is furnished which, with the special service by the Valentine Advertising Department, will equip any motor-car paint-shop to go after business systematically and successfully.

A "Valentine Shop-Sign," five feet long, is offered to any shop where desired at \$1.50, less than quantity cost. To paint such a sign would cost \$5.00 or \$6.00.

Get your list of motor-car owners. Put up your sign. Begin your newspaper advertising. And then send out once or twice a month something in the way of a reminder to everyone on your list of car-owners—a blotter, a postal card, a booklet, a letter, a leaflet.

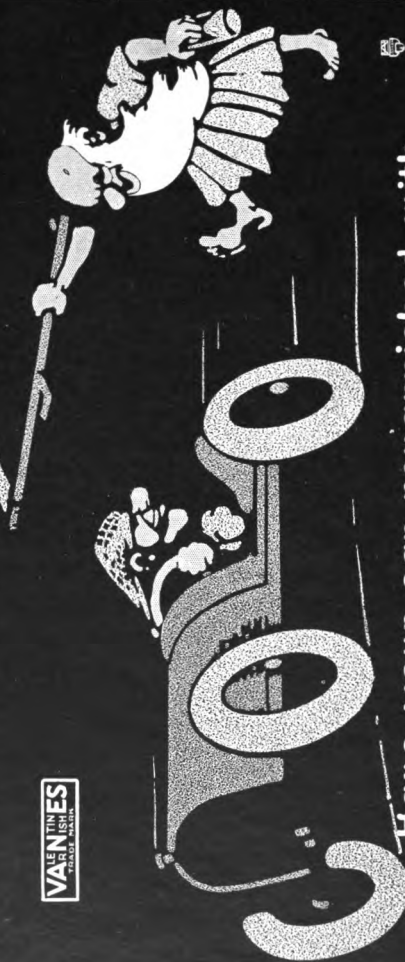
Write to Advertising Service Manager, Valentine & Company.



Poster in seven colors furnished to all paint-shops,
intended to stimulate owners to have their
cars refinished oftener

BE AHEAD OF TIME

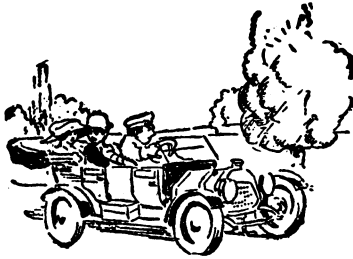
VALENTINE'S
TRADE MARK



Have your car revarnished with
VALENTINE'S
before the old paint is destroyed.

Poster in five colors furnished to all paint-shops

ADVERTISING



A New Car for an Old One

IT is the **FINISH** that makes the machine as far as appearance goes. What about letting us repaint your automobile? We agree to use throughout Valentine & Company's varnishes, which are the most expensive in first cost but standard for excellence the world over. Valentine & Company guarantee quality.

We repair and rebuild tops, repair wheels, springs and bodies. Come in and see us.

**YOUR BUSINESS CARD
HERE**

(Advertising postal card furnished all paint-shop customers.)

THE PAINT-SHOP HANDBOOK



**YOU NEEDN'T MISS
EVEN ONE SUNDAY, IF YOU
DON'T WANT TO.**

**Why give up your
motor car for several
weeks to have it re-
painted? I agree to
give you a perfect job
- with Valentine's
Varnishes, the best
and highest priced
made - in a few days.**

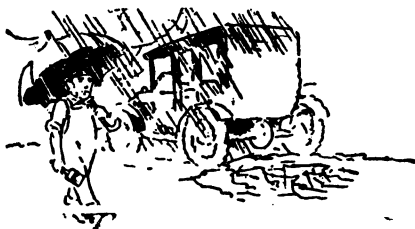
**Prices the LOWEST
for good work.**

**Send around your car
to-day.**

**YOUR BUSINESS CARD
HERE**

(Sample of newspaper ad. plates furnished
to Valentine customers.)

ADVERTISING



TRADE **VALENTINE'S** MARK
VARNISHES

**YOUR MOTOR HAS TO
STAND MUCH HARDER
USAGE THAN A CARRIAGE.**

**It won't do to revar-
nish it the way a car-
riage is sometimes
revarnished. Most
painters think it will.
We KNOW HOW to put
MOTOR CAR varnish on
a motor car, and make
a job that will out-
wear two ordinary
jobs. For one thing we
promise to use only
Valentine's Vanadium
Varnishes, the HIGHEST
PRICED and best in the
world. The price of
our job will not be
high however.**

**Send the car around
TO-DAY.**

(YOUR BUSINESS CARD HERE)

**(Sample of newspaper ad. plates furnished
to Valentine Customers.)**

CHAPTER XV

WHEN AND HOW TO START A PAINT-SHOP

A concluding chapter in this volume may well be devoted to the problems of the new paint-shop, and of the garage which is considering the question of installing a paint-shop as a part of its equipment for serving its customers and making money.

It is not intended to induce every garage in America to put in a paint-shop.

In many towns and cities the paint-shop facilities are sufficient and in some places there are too many shops.

It should be remembered, however, that the automobile-painting business is destined to have a tremendous growth, for reasons noted in an earlier chapter.

It is certain also that many new paint-shops will be established to take care of this new business, and that if they are started right they will make a lot of money in the next few years.

The foregoing chapters are all equally applicable to the new garage paint-shop. It is intended here to suggest a few considerations for the garage-man especially, to tell him in plain language what he is up against and what he must do to be saved.

LOCATION IMPORTANT

The matter of the location of the garage is a most important one. If it is in one of the

WHEN AND HOW TO START A PAINT-SHOP

smaller cities or towns, the garage-man may well consider the character and importance of the vehicle-painting competition he will be up against. If there are one or more live, up-to-date vehicle-painters who have been willing and able to see the handwriting on the wall and equip their paint-shops to take care of automobile painting, the garage-man will not have as good an opportunity to establish a paying paint-shop.

In the large city with a great number of cars to draw on, this factor is not of importance. If the garage-man has the room and can get hold of the right human material for his paint-shop and is a good business man, and a wide-awake advertiser, he can build up a big business for his paint-shop against any amount of competition that he will meet.

The next question in importance to that of competition is probably that of the human element. The number of good vehicle-painters is sufficient. The number of good painters who are at the same time good business men is much less. There is a superstition in the trade that vehicle painting is not a paying proposition. As a matter of fact, thousands of vehicle paint-shops are on a paying basis and vehicle painting is a paying proposition. The difficulty is in the human element.

PAINT-SHOP DISTINCT FROM GARAGE

If the garage-man is himself a good business

THE PAINT-SHOP HANDBOOK

man he may employ a good foreman and good mechanics and run his own paint-shop and make a success of it. On the other hand, if he can get hold of the right man to manage the paint-shop end, a man who has made a success of the business, the best plan for the garage-man will be in most cases to make some arrangement by which the paint-shop is to be run separately. A partnership may be formed, the garage-man furnishing the shop and the painter running it. Or the painter may be hired and given full control. The garage-man who wants to have a paint-shop connected with his garage may look about for a first-class, up-to-date painter who is struggling with a poorly equipped shop and persuade him to give up his old shop and move into his garage on one basis or another.

Another question for the garage-man to consider is that of convenience and expedience. Has he more room in his building than he needs for his machine-shop and his storage? If his excess room is on a second floor, has he already an elevator service, or would it be necessary to install an elevator? What proportion of his work is for his neighbors and fellow townsmen, and what part for tourists who wish quick repairs? The man from fifty miles away who stops at the garage to have small repairs made in a hurry is not likely to be a customer of the garage paint-shop. The paint-shop must depend largely on the motor-cars in its own town or county.

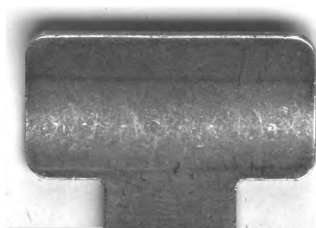
WHEN AND HOW TO START A PAINT-SHOP

Supposing that the garage-man has considered all these propositions and has decided that he wants a paint-shop and will have one. It may be said without hesitation that there is a big, fine, expanding field for the garage paint-shop and the opportunity to make a lot of money not only in the shop, but because the paint-shop can be made an important adjunct to the garage itself.

A SEASONABLE OPPORTUNITY

If the garage is a good one, it is the most natural thing in the world for the car-owner to want his car to be painted where it is stored and where it is repaired. It is also most convenient for the car-owner to have the general overhauling of the car and the painting done at the same time. Furthermore, it is a factor of importance often, that the garage-man with the paint-shop can offer to store the car during the winter months and at the same time paint and have it ready for spring. All of these factors count in bringing painting business to the garage which has a paint-shop.

In conclusion, the garage paint-shop to be successful must not only have the right man behind it and the right man in it and the right location, but it must use good materials, must do good work, must charge enough for its work, and must advertise.



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